CLAIMS

1. A method of calculating a first new path metric from two old path metrics and a branch metric, the method comprising: determining the difference between the two old path metrics; performing a first comparison of the branch metric and said difference; selecting, on the basis of said first comparison, one of the old path metrics for a first combination with the branch metric; and selecting, on the basis of said first comparison, whether said first combination is by addition or subtraction.

2. A method according to claim 1, wherein said first comparison comprises determining whether the result of the first comparison can be determined from the signs of said difference and said branch metric or whether the result of the first comparison needs to be calculated from said difference and said branch metric.

3. A method according to claim 1 or 2, further comprising storing the outcome of the first comparison for use as an item of trace-back information.

4. A method according to claim 1, 2 or 3, wherein said first comparison comprises determining which is the larger of said difference and double the branch metric.

5. A method according to any one of claims 1 to 4, further comprising calculating a second new path metric from the two old path metrics and the branch metric by: performing a second comparison of the branch metric and said difference; selecting, on the basis of said second comparison, one of the old path metrics for a second combination with the branch metric; and selecting, on the basis of said second comparison, whether said second combination is by addition or subtraction.

6. A method according to claim 5, wherein said second comparison comprises determining whether the result of the second comparison can be determined from the signs of said difference and said branch metric or whether the result of the second comparison needs to be calculated from said difference and said branch metric.

7. A method according to claim 5 or 6, further comprising storing the outcome of the second comparison for use as an item of trace-back information.

8. A method according to claim 5, 6 or 7, wherein said second comparison comprises determining which is the larger of said difference and minus double the branch metric.

9. A method according to claim 1, 2 or 3, wherein said first comparison comprises determining which is the larger of said difference and minus double the branch metric.

10. Apparatus for calculating a first new path metric from two old path metrics and a branch metric, the apparatus comprising: subtracting means for determining the difference between the old path metrics; comparing means for performing a first comparison of the branch metric and said difference; and selecting means for selecting, on the basis of said first comparison, one of the old path metrics for a first combination with the branch metric and for selecting, on the basis of said first comparison, whether said first combination is by addition or subtraction.

11. Apparatus according to claim 10, wherein said comparing means is arranged to determine whether the result of the first comparison can be determined from the signs of said difference and said branch metric or whether the result of the first comparison needs to be calculated from said difference and said branch metric.

12. Apparatus according to claim 10 or 11, further comprising storage means for storing the outcome of the first comparison for use as an item of trace-back information.

13. Apparatus according to claim 10, 11 or 12, wherein said first comparison comprises determining which is the larger of said difference and double the branch metric.

14. Apparatus according to any one of claims 10 to 13, wherein said apparatus is arranged to calculate a second new path metric from said old metrics and said branch metric, said comparing means is arranged to perform a second comparison of the branch metric and said difference and the selecting means is arranged to select, on the basis of said second comparison, one of the old path metrics for a second combination with the branch metric and is arranged to select, on the basis of said second comparison, whether said second combination is by addition or subtraction.

15. Apparatus according to claim 14, wherein said comparing means is arranged to determine whether the result of the second comparison can be determined from the

signs of said difference and said branch metrics or whether the result of the first comparison needs to be calculated from said difference and said branch metric.

16. Apparatus according to claim 14 or 15, further comprising storage means for storing the outcome of the second comparison for use as an item of trace-back information.

17. Apparatus according to claim 14, 15 or 16, wherein said second comparison comprises determining which is the larger of said difference and minus double the branch metric.

18. Apparatus according to claim 10, 11 or 12, wherein said first comparison comprises determining which is the larger of said difference and minus double the branch metric.

19. A program for causing data processing apparatus to perform a method according to any one of claims 1 to 9.

20. A method of calculating one or more new path metrics from two old path metrics and a branch metric, the method being substantially as hereinbefore described with reference to the accompanying figures.

21. Apparatus for calculating one or more new path metrics from two old path metrics and a branch metric, the apparatus being substantially as hereinbefore described with reference to the accompanying figures.